

Amendments to the Claims:

1 1. (canceled)

1 2. (canceled)

1 3. (currently amended) A drive system according to Claim 31 ~~[[2]]~~, wherein the drive
2 networks and intercommunication networks are arranged using a ~~preferably~~ serial ring
3 structure and are organised in accordance with the master/slave principle.

1 4. (currently amended) A drive system according to Claim 3, wherein the
2 communication ~~component is~~ components are designed in the scope of the master/slave
3 principle as a communication master of the respective intercommunication network.

1 5. (currently amended) A drive system according to Claim 31 ~~[[2]]~~, wherein the
2 communication components are produced with serial interfaces and are controlled by at
3 least one processor.

1 6. (currently amended) A drive system according to Claim 5, wherein the communication
2 ~~component is~~ components are provided with functions of a communication manager.

1 7. (currently amended) A drive system according to Claim 6, wherein the plurality of
2 intercommunication networks are arranged according to a star structure with the multi-
3 link controller as the star center ~~centre~~.

1 8. (previously presented) A drive system according to Claim 7, wherein at least one
2 intercommunication network is designed for data transmission synchronously with a
3 clock of the multi-link controller.

1 9. (currently amended) A drive system according to Claim 8, wherein in at least one of
2 the intercommunication networks, at least one of the nodes is configured as ~~using~~ a
3 master for other intercommunication networks, and their communication control signals
4 are delivered to the other intercommunication networks by the multi-link controller.

1 10. (previously presented) A drive system according to Claim 9 wherein setpoint position,
2 speed and acceleration values are distributed to one or more of the drive networks via the
3 inter-communication system or network.

1 11. (currently amended) A drive system according to Claim 10, wherein the
2 communicated control information contains logical allocation of one or more drive units
3 to one of the networks.

1 12. (previously presented) A drive system according to Claim 11, wherein a transfer that
2 at least partially controls the intercommunication networks takes place via the multi-link
3 controller.

1 13. (previously presented) A drive system according to Claim 12, wherein all information
2 for the allocation of one of the drive units to a respective drive network is transferred via
3 the multi-link controller to each intercommunication network.

1 14. (currently amended) A drive system according to Claim 13, wherein at least a
2 plurality of the drive networks are designed, using program and/or circuit technology, in
3 accordance with the master/slave principle, respectively with a communication master
4 which forms a node of an intercommunication network, and the multi-link controller
5 has all drive units of this intercommunication network each respectively allocated via it
6 to one of the communication masters.

1 15. (currently amended) A drive system according to Claim 31 ~~[[+4]]~~, wherein a node of
2 at least one of the intercommunication networks is both ~~[[as]]~~ a communication master
3 for this intercommunication network, for its individual operation without coupling with
4 the multi-link controller, and ~~[[as]]~~ a communication slave for coupling with the multi-
5 link controller that operates as a communication master.

1 16. (previously presented) A drive system according to Claim 15 wherein the multi-link
2 controller further comprises a plurality of communication components respectively
3 configured as communication masters for external networks, and a processor that controls
4 them.

1 17. (previously presented) A drive system according to Claim 16 wherein the multi-link
2 controller includes communication interfaces designed for synchronous and serial data
3 transmission.

1 18. (previously presented) A drive system according to Claim 16 wherein the multi-link
2 controller includes a processor provided with program code for the distribution, routing
3 of data from one communication interface to another.

1 19. (previously presented) A drive system according to Claim 18 wherein the multi-link
2 controller further comprises one or more modules that control the communication
3 interfaces, for communication management with these communication interfaces.

1 20. (currently amended) A drive system according to Claim 16 ~~[[19]]~~ wherein the multi-
2 link controller further comprises individual parameterisation from an external master data
3 source.

1 21. (previously presented) A drive system according to Claim 20 wherein the multi-link
2 controller further comprising a reception storage unit for data between the
3 communication interfaces.

1 22. (previously presented) A drive system according to Claim 20 wherein the multi-link
2 controller further comprises an instrument, using program and/or circuit technology, for
3 converting one communication protocol of a first intercommunication network into
4 another communication protocol of a second intercommunication network.

1 23. (currently amended) A drive system according to Claim 31 ~~[[2]]~~ and further ~~further~~
2 comprising a drive synchronisation control unit as nodes of an intercommunication
3 network for an electrical drive system having at least one communication interface and at
4 least one processor that controls it and is provided with the following functional modules:
5 ~~[[1]]~~ (a) a master axis module, designed to receive, to generate and/or route data and/or
6 commands for a virtual master axis via the at least one communication interface and
7 ~~[[1]]~~ (b) a data distribution module, which is designed for controlling a data and/or
8 command flow via the least one communication interface with one of the networks, in
9 particular the intercommunication network.

1 24. (previously presented) A drive system according to Claim 23 wherein the
2 synchronisation control unit has the processor also provided with a second

3 communication interface and a drive communication module that can be coupled with it
4 and is designed for controlling a data and/or command flow via the second
5 communication interface with one of the drive networks.

1 25. (previously presented) A drive system according to Claim 24 wherein the
2 synchronisation control unit has a master axis module designed for access to the two
3 communication interfaces for the purpose of bidirectional data and/or command
4 interchange between two networks.

1 26. (currently amended) A drive system according to Claim 25 wherein the
2 synchronisation control unit has a processor also provided with a third communication
3 interface, with which the drive communication module and/or data distribution module
4 for organising a command and/or data flow between one of the drive and/or
5 intercommunication networks, on the one hand, and a further network, ~~in particular~~
6 control network with asynchronous data interchange, on the other hand, can be coupled.

1 27. (previously presented) A drive system according to Claim 26 wherein the
2 synchronisation control unit has a drive communication module designed for access to
3 the second and third communication interfaces for the purpose of bidirectional data
4 and/or command interchange between two networks.

1 28. (previously presented) A drive system according to Claim 26 wherein the
2 synchronisation control unit has a data distribution module designed for access to at least
3 two of the first, second and third communication interfaces for the purpose of
4 bidirectional data and/or command interchange between at least two of the different
5 networks.

1 29. (previously presented) A drive system according to Claim 28 wherein the
2 synchronisation control unit has a processor provided with one or more modules that
3 regulate and/or control the first, second and third communication interfaces, for
4 communication management via these communication interfaces.

1 30. (previously presented) A drive system according to Claim 29 wherein the
2 synchronisation control unit has a data distribution module which comprises filtering or
3 other processing functions for data and commands from at least one communication
4 interface for at least one other communication interface.

1 31. (new) An electrical drive system for the synchronized adjustment of the position,
2 speed or acceleration of a plurality of movable, functional parts of devices and machines,
3 the system comprising:

4 (a) a plurality of drive units each connected to one or more of the functional parts
5 for said adjustment under computer assisted control;

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- 6 (b) a plurality of drive networks, each drive network having a plurality of the
7 drive units as network nodes, each drive network allocated to a group of the
8 functional parts, the nodes of at least one of the drive networks connected together
9 for communication between the nodes;
- 10 (c) a plurality of intercommunication networks for synchronizing the drive units
11 of different drive networks, each intercommunication network connecting a node
12 of a drive network with a node of another drive network; and
- 13 (d) a multi-link controller having a plurality of communication components, each
14 communication component being a node of one of the intercommunication
15 networks for coupling the nodes of the intercommunication network.